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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Advanced Television Systems and Their Impact upon The Existing Television Broadcast Service	)	MM Dkt. No. 87-268

To: The Commission

REPLY TO FURTHER COMMENTS OF KOLO-TV

Sierra Broadcasting Company ("Sierra"), licensee of KRNV(TV), Reno, Nevada, hereby replies to the November 7, 1997 "Further Comments of KOLO-TV" filed in the above-captioned proceeding by Stephens Group, Inc., licensee of KOLO-TV, Reno, Nevada ("KOLO-TV"). Sierra submits that KOLO-TV's Further Comments are transparently obstructionistic and should be rejected, based upon the engineering studies Sierra has submitted in this proceeding.

I. Sierra Has Demonstrated that Its Proposal Is a Reasonable Solution to the Unfortunate and Extreme Service Loss Resulting from the Commission's Initial DTV Table.

As the Commission is aware, the Sixth Report and Order in this proceeding awarded Sierra DTV Channel 33, which provided

only 59.4 percent DTV replication of KRNV's current NTSC signal area and a mere 71 percent of its currently served NTSC audience. The result in terms of service to Reno market viewers would be devastating: Some 110,000 persons would lose Grade B Service were the table to be implemented unchanged. In fact, Sierra's DTV allocation represented the worst DTV to NTSC replication of any television station in the nation.

Although Sierra's position was unique, the solution was relatively straightforward: Pair DTV Channel 9 with KRNV's NTSC Channel 4, and specify a location for KRNV atop Slide Mountain, where a community antenna site is currently being developed and where KOLO-TV's adjacent NTSC Channel 8 already is located. Competitor KOLO-TV -- which fared relatively well in the DTV sweepstakes -- has attempted to block KRNV's attempt to remain viable. KOLO-TV has erected a series of flimsy barriers -- specious arguments why Sierra's plan purportedly will not work for a variety of technical reasons.

As demonstrated in the attached engineering statement prepared by D.L. Markley & Associates, Inc., however, KOLO-TV's objections are easily resolved. First, KOLO-TV's concerns about the stability of the pattern of the directional antenna that Sierra may be required to use have been negated in real life practice. At least two stations use VHF directional antennas --

manufactured by Harris Corporation, which also would supply the Sierra antenna -- that have maximum-to-minimum ratios of more than 10 dB. It is not yet clear that such a ratio would be required by KRNV to protect KQED-TV Channel 9, San Francisco. The technology is available if needed, however, and it has been demonstrated even in the considerably less mountainous terrain of Northern Michigan. Thus, there would be ample basis upon which to grant Sierra a waiver of the Commission's directional antenna rules, should one be necessary.

KOLO-TV also claims that it would be difficult for two adjacent channel stations to maintain proper frequency separation unless they were co-owned. Sierra submits that, given the location of the two transmitters, co-ownership is irrelevant. The two sites likely will be separated by less than one-tenth of a mile. The two transmitters could be "hard wired" together and operated with proper frequency separation as easily as they could be were they located under the same roof. Even if the two facilities could not be connected directly, the high signal strength at the site would make off-the-air pick-up particularly reliable. Ideally, both stations would install highly precise frequency control equipment, which Sierra is willing to purchase. Moreover, such an arrangement would work even if Sierra's station were the only one so equipped.

Finally, as to KOLO-TV's argument concerning possible interference to KQED-TV, Sierra would point out again that its proposal is entirely consistent with the Commission's DTV to NTSC spacing rules. Further, notwithstanding KOLO-TV's speculation about KRNV's higher than maximum height, the Commission's height and ERP formulas already have contemplated such occurrences, and Sierra's proposal is consistent with those formulas.

CONCLUSION

Sierra's goal here is to avoid a disastrous curtailment of service that would result were the Commission not to reconsider its initial allocation to KRNV. Some 110,000 persons would lose the service of KRNV and with it their only NBC Network service. The extreme position in which KRNV's audience has been placed warrants the sort of "thinking outside the box" represented by Sierra's proposal. This is particularly true since it has been demonstrated that no other station or its respective audience will be disadvantaged by Sierra's plan, and the viwers of KRNV will continue to receive the service upon which they have come to depend.

Accordingly, Sierra submits that KOLO-TV's Further Comments should be rejected and that Sierra's suggested pairing of DTV Channel 9 to its NTSC Channel 4 be granted, with the Channel 9

transmitter to be located at the Slide Mountain community antenna site.

Respectfully submitted,

SIERRA BROADCASTING CORPORATION

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Dated: December 11, 1997

REPLY TO FURTHER COMMENTS OF KOLO-TV

The following engineering statement has been prepared for **Sierra Broadcasting Company**, licensee of Television Station WRNV at Reno, Nevada in support of their "Reply to Further Comments of KOLO-TV" filed in connection with the Commission's Report & Order in Mass Media Docket No. 87-268.

The Further Comments were filed by the Stephens Group, Inc., licensee of KOLO-TV at Reno, Nevada ("KOLO-TV"). Sierra has proposed the possible use of a directional antenna should it be necessary to protect the signal of KQED-TV in San Francisco. KOLO-TV speculates whether Sierra would therefore find it necessary to request a waiver of Section 74.685(e) of the Commission's Rules and Regulations. Its attorney observes that "neither the laws of physics nor the Commission opinion as to television directional antennas have changed in the last forty five years"; i.e. since the Commission's 1952 Sixth Report & Order on Television Allocations. While counsel is correct that the laws of physics have not changed appreciably during that period of time, the experience and abilities present in the broadcast industry have changed.

Antennas utilizing a maximum to minimum ratio of greater than 10 dB have been installed are operating satisfactorily. For example, KXLO-TV at El

Centro, California and WBKP-TV at Traverse City, Michigan both utilize VHF antennas with maximum to minimum ratios of more than 10 dB. Those antennas were manufactured by Harris Corporation which is the company proposed by Sierra as the manufacturer for its DTV and NTSC antennas. That manufacturer has assured Sierra that there is no problem with maintaining acceptable stability with such a pattern and that the reception in the null area will be quite acceptable out to the DTV noise limited contour or the Grade B contour for NTSC service.

KOLO-TV's engineering statement claims that such waivers are not routinely granted unless there is a mountain range in the null area. It is respectfully submitted that the proposed facility does face the Sierra Nevada Mountains which are considered a range and which lie to the West of the site. It is not known what mountains affect Traverse City, Michigan.

KOLO-TV suggests that Sierra is effectively admitting that the KOLO-TV study is correct because Sierra has proposed to tighten the directional antenna pattern. Such is not the case. Sierra still believes its original study to be correct and still believes that the DTV allocation proposed would be acceptable to the Commission as it fully complies with the Commission's spacing requirements to KQED-TV. Even KOLO-TV acknowledges that Sierra would meet the FCC spacing requirements.

KOLO-TV speculates also that it would be extremely difficult for Sierra to maintain the proper frequency spacing between the proposed DTV facility and the existing KOLO-TV NTSC facility. Their concern is that an off-the-air signal would not be dependable. However, the distance from the KOLO-TV transmitter site to the proposed DTV location is less than one-tenth of a mile. Sierra would be willing to install a cable between the transmitter buildings so the KOLO-TV NTSC and the Sierra DTV transmitters could be "hard-wired" together and thus provide the same degree of stability that would be obtained were they to be co-owned and installed in the same building. Sierra will also cover any reasonable costs for KOLO-TV to provide such signal.

Discussions also have been held with transmitter manufacturers to assure that such frequency coordination would be possible even absent the ability to connect the transmitters directly. Both Harris and Comark have stated that the simplest method would be simply to utilize an extremely accurate frequency control scheme at both transmitters; i.e. one based on GPS signals. Sierra would be willing to pay for such an addition to the KOLO-TV transmitting equipment and to install such a system in the Sierra DTV transmitters. Even if KOLO-TV refused to cooperate in such a system, it would be possible to track the KOLO-TV frequency with the desired accuracy using off-the-air pickup especially given the

high signal strength which would be present at the Sierra DTV site from KOLO-TV. It would appear that this will be necessary for several further stations,

as the proposed channel 9 DTV allocation for Sierra is not the only instance where a DTV allocation has been proposed adjacent to and above an existing NTSC station.

It should be noted that the use of a high accuracy frequency standard for each transmitter would be preferable even if the transmitters were in the same building. KOLO-TV would have to install such a system themselves were they to obtain the Ch. 9 DTV allocation. The proximity of the DTV and NTSC transmitters to each other is not a factor regardless of KOLO-TV's claims that such operation would be "easier".

KOLO-TV argues that greater interference would be caused to KQED-TV as a result of the elevation of the Slide Mountain Electronics Site. However, the Commission's Rules and Regulations specifically state a maximum power and antenna height above average terrain for new DTV facilities. For heights greater than that allowed for full powered DTV stations, an equation is listed in the Rules which is to be used to calculate the permissible effective radiated power at the greater height. Therefore, the Commission has contemplated and fully covered those cases where the height is greater than that of Section 73.622(f) of the

Commission's Rules and Regulations by specifying the degree of required power reduction. That power has been calculated by Sierra and has not been questioned by KOLO-TV.

It should be noted that KOLO-TV now shows a new area where they claim interference would still exist. A significant portion, if not the majority, of the population in that area is outside of the DMA for KQED-TV. Instead, it lies within the Sacramento-Stockton-Modesto DMA where an excellent public television signal is provided by KVIE at Sacramento. Therefore, any possible interference would be reduced to a significantly lower number if consideration is only given to the actual market area of KQED-TV. It would appear that the interference projected by KOLO-TV would be less than 1% of the total population within the San Francisco DMA. It is noted that the KOLO-TV comments acknowledge that 1% is a "de minimus" criteria which has been adopted by the Commission's staff.

In the engineering statement, KOLO-TV's engineer again raises the issue of antenna height and the response to their previous arguments concerning antenna height. That has been totally explained in previous comments filed with the Commission. The numbers that were slightly in error previously have been corrected.

Further, it is not necessary to specify the coordinates for an allocation to the nearest second. It was clearly explained in the comments that the exact location of the tower is not known and will not be known until the development of the new antenna site is completed with the Forest Service. It is believed that the coordinates furnished to the Commission will be correct within a few seconds of latitude and longitude. The coordinates used in Sierra's comments are sufficient for the purposes of allocation. By the time the DTV Application for Construction Permit is filed, the coordinates will be finalized and the exact location of the tower will be provided to the Commission.

The preceding statement has been prepared by me or under my direction and is true and correct to the best of my knowledge and belief.

Dec 10, 1997
Date

Jeremy D. Ruck, Consulting Engineer

CERTIFICATE OF SERVICE

Lorraine Handel, hereby certify that on this 11th day of December 1997, I caused copies of the foregoing "Reply to Further Comments of KOLO-TV" to be mailed via first-class, postage prepaid mail to the following:

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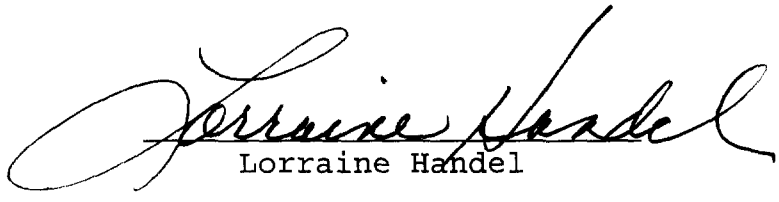

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